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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,800	10/20/2003	Yasunori Yokota	YOKOTA=10A	2461

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EXAMINER

TORRES, MELANIE

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/687,800	<b>Applicant(s)</b> YOKOTA, YASUNORI	
	<b>Examiner</b> Melanie Torres	<b>Art Unit</b> 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/028,829.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/20/03</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09072332 in view of Yoshida et al.

Re claims 1-3, JP 09072332 teaches wherein a roller bearing cage composed of a pair of annular cylindrical cage rims (21) arranged in a way spaced axially apart from each other and extended circumferentially in parallel with each other, and cage bars positioned between the annular rims at regular intervals around curved surfaces of the rims and made integrally with the rims to form a pocket between any two adjacent cage bars, which a roller is accommodated rotation; cage bars are arranged with their outside surfaces being in flush relation with the outside peripheries of the rims; the cage bar has an inside surface that is sunk at an axial middle area thereof to form a recess extending in depth radially outwardly beyond a diameter across pitch circle on the rollers and in axial length shorter than the pocket, so that the cage bar is made slender at the middle area thereof on account recess, with leaving axially opposing ends thereof thick, and circumferentially opposing cheeks thick ends provide guide surfaces on which the roller rolls. (Figures 4 and 5)

However, JP 09072332 does not teach wherein on the thick ends the cage bar there are provided outside retainer lugs (1a1) in the pocket to keep the roller against outward escape out of the associated pocket and inside retainer lugs (1a3) that also prevent against inward escape out of the into the pocket to keep the roller associated pocket, inside peripheral wherein an annular corner where the surface and any one end of the axially opposing end surfaces of the annular rims merge with each other is chamfered off into a depth reaching one-third an axial thickness of the associated rim to form a slant annular surface. Yoshida et al. teach wherein on the thick ends the cage bar there are provided outside retainer lugs (1a1) in the pocket to keep the roller against outward escape out of the associated pocket and inside retainer lugs (1a3) that also prevent against inward escape out of the into the pocket to keep the roller associated pocket, inside peripheral wherein an annular corner where the surface and any one end of the axially opposing end surfaces of the annular rims merge with each other is chamfered off into a depth reaching one-third an axial thickness of the associated rim to form a slant annular surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide retainer lugs in the invention of JP 09072332 to provide the rollers with additional stability.

Further, JP 09072332 does not teach a slant annular surface which slopes to a plane normal to an axial direction of the rim, with an angle less than 45 deg, wherein a corner where the axial end surface of the annular rim merges with the outside periphery of the annular rim is slightly rounded, wherein the slender area of the cage bar defined a

manner having an inside surface of an axial length extending over a range of 50% to 80% of an axial length of the pocket, and wherein a slant surface connecting the slender area and any one of the thick ends is set to slope to a plain normal to the slender area, with an angle less than 45 deg. It would have been an obvious matter of design choice to modify JP 09072332 to have the dimensions discussed above since applicant has not disclosed that having the dimensions solves any stated problem or is for any particular purpose and it appears that the roller bearing cage would perform equally well with a variety of dimensions.

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Torres whose telephone number is (703)305-0293. The examiner can normally be reached on Monday-Friday, 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on (703)308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT  
April 1, 2004

*Melanie Torres*  
4-1-04